

Chronology of Events Leading to the Recommendation
on the ASCII

1. History of the ASCII Development.

The American Standards Association Sectional Committee X3 on Computers and Information Processing was formed in 1960. Sub-Committee X3.2 on Codes and Input/Output began to function in the fall of 1962 attacking first the problem of a standard coded character set. The first output product of this work was the American Standard Code for Information Interchange (ASCII) ASA X3.4-1963 which was approved after considerable controversy as an American Standard in June of 1963. The coded character set was not complete in that there was a section of codes to which no characters were assigned pending further research on character requirement. Following some two years of further research and international deliberations, a revision of the ASCII was approved by the ASA in December 1965. This revision assigned characters to all 128 positions in the code table and included some changes in characters and character positions in the interest of compatibility with the International Organization for Standardization (ISO) 7-Bit Code and the CCITT proposed 7-Bit new Alphabet-Code (Note. As a result of a joint ISO/TC 97/SC2 and CCITT/GM Alphabet meeting in Paris in April 1966, further minor changes were made in the ISO and CCITT to bring them into complete agreement. These same changes to the ASCII are now being processed on an expedited basis. The results should be known and the action completed in the next few months.) The ISO 7-Bit Code appears to have the support of all the national bodies participating in the ISO/TC97 project. The European Computer Manufacturers Association (ECMA) has adopted this code as an ECMA standard. A number of the participating national bodies have either incorporated the code in national standards or have such action underway. This is the ASCII in the United States. The U.S. Department of Defense introduced consideration of the ISO 7-Bit Code into the NATO where it is being considered for adoption as a NATO standard. The ASCII has been adopted as a MILITARY STANDARD (MIL-STD - 188B) for communication systems and as a JCS standard for Information Interchange in the National Military Command and Control System. The U.S. Air Transport Association and the International Air Transport Association, acting jointly in developing plans for digital air-ground communications, have adopted the ISO 7-Bit Code as an ATA-IATA standard for communications. The above are examples of the great interest shown by many users organizations as well as equipment suppliers in achieving international code compatibility. From an implementation standpoint,

the ASCII will be the code used in the worldwide DOD AUTODIN general purpose communication system and is now the code used in the Advanced Record System under lease by the General Services Administration. The ATA-IATA have established a committee to develop implementing plans for converting to the 7-Bit Code from the presently used 5-Bit Baudot code. It is against this general background that the adoption of ASCII as a Federal Standard has been considered,

2. The Standards Panel of the BOB ADP Advisory Council meeting on January 25, 1965, agreed to a statement on the adoption of the ASCII by the Federal Government and recommended that the statement be issued as a policy announcement.
3. The Director of the Bureau of the Budget, in a letter of September 28, 1965, requested the views of the Secretary of Commerce on whether the ASCII should be adopted as a Federal Standard. A similar letter was sent to the Administrator of General Services on the same date.
4. A joint Secretary of Commerce-Administrator of GSA letter was sent under date of November 1, 1965, to ADP and communications equipment suppliers enclosing the recommendations of the Standards Panel and requesting a written response commenting on the economic impact of the proposed policy statement and an indication of the earliest date when equipment responsive to the proposed policy would be available. The responses of the suppliers generally supported the proposed standardization policy and objectives. A number indicated that they were either in a position to supply ASCII equipment or were developing products based on the ASCII. Some indicated that fiscal year 1967 was too early to include ASCII in procurement specifications. The written responses, particularly from computer manufacturers, were not sufficiently definitive to determine when a full range of ASCII equipment would be available.
5. The views of the using departments of the Federal Government were also solicited in a joint Commerce/GSA letter carrying the same date of November 1, 1965. Responses of the departments and independent offices indicated very strong support for the proposed policy on standards as well as support for the adoption of ASCII as a Federal Standard. Some of the responses, however, indicated a misunderstanding that the proposed action would require conversion of existing installed systems to ASCII.
6. A collective meeting of NBS, GSA, and other Federal department and independent office representatives was held on February 15, 1966. The purpose of this meeting was to clear up any questions on the Standards Panel's statement on ASCII, to bring out any major problems or objections with respect to the adoption of ASCII and to make clear the areas of application. This meeting confirmed the strong support within the Federal Government for ADP standards in general and for the ASCII in particular. A total of 45 representatives attended this meeting representing 31 Federal departments and independent offices.

7. Two days of collective meetings were held on March 7 and 8, 1966, between NBS and GSA representatives on one hand and ADP and communication equipment suppliers on the other. The primary purpose of these meetings were to clear up any misunderstandings on the proposed areas of application under consideration for ASCII and to obtain the suppliers views on when ASCII should be made a requirement in Government ADP and communication equipment procurement actions. Manufacturers indicated a preference for private meetings with NBS-GSA representatives to discuss availability of ASCII equipment. Private meetings were, therefore, scheduled with the following suppliers:

<u>Company</u>	<u>Meeting Date</u>
Litton Industries (MONROE)	March 1, 1966
Honeywell, Incorporated	March 31, 1966
Philco Corporation	April 15, 1966
Burroughs Corporation	April 19, 1966
RCA	April 19, 1966
Control Data Corporation	April 20, 1966
UNIVAC, Div. Sperry Rand Corp.	April 21, 1966
DURA Corporation	April 22, 1966
Digitronics Corporation	May 3, 1966
IBM Corporation	May 20, 1966

8. The NCR Company responded with a letter having concluded no private meeting was necessary. The General Electric Company representatives have also stated that a letter will be forwarded but it has not been received. A number of other companies have indicated no private meeting was necessary or desired.
9. Records of the correspondence noted above, and reports of meetings held and notes taken at the meetings, are retained in the files at the Center for Computer Sciences and Technology, National Bureau of Standards.

(For Advance Information of the Interagency Committee on ADP)

Tentative Outline of Report of Accomplishments
in the Management of
Automatic Data Processing

1. Requirement: President's memo of June 28, 1966 requires the Director, Bureau of the Budget to report to him to December 31, 1966 and every six months thereafter on progress being made to improve the management of ADP.
2. Plans for Implementation: BOB circular will call for submission of agency reports to meet the President's requirement. Initial report would be due in BOB on November 25, 1966 to cover agency accomplishments from March 1965 to November 1966. Subsequent reports would be due on May 25 and November 25 to cover previous six months.
3. Probable Report Outline: Consideration is being given to having agency reports consist of 5 sections:
 - ✓ A. Accomplishments in the Use of electronic digital computers (would apply to computer systems installed or ^{revised} ~~reviewed~~ during report period).
 1. Brief description of the program in which computers are used.
 2. Benefits being obtained.
 3. The role of the computer in obtaining benefits.
 - ✓ B. Accomplishments in the management of ADP activities.
 1. Action taken by agencies in response to following recommendations in Report to the President on the Management of ADP in the Federal Government dated March 2, 1965.
 - a. Chapter 2, Recommendation 3
 - b. Chapter 5, Recommendation 2

2. Other actions, such as standardization of computer-based systems, consolidation of computer facilities, use of excess equipment.

— C. Plans for the future

1. Plans for the use of computers
2. Plans for the management of ADP activities

— D. Areas in which management improvement of ADP requires action on the part of other agencies.

— E. Description of ADP organizational framework and assignment of responsibilities thru which the agency head is assured that ADP is properly managed.